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Environmental Services REAC
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LOCKHEED MARTIN

Date: November 8, 2007

To: Work Assignment Manager RAJ SINGHVI, EPA/ERTC

From: YI-HUA LIN, Organic Group Leader, Analytical Section, REAC

Thru. VINOD KANSAL, Analytical Section Leader, REAC. D. Fuller for Vinod Kansal

Subject: Preliminary Results of Project TIDEWATER BAILING SITE WA# 0-292

Attached please find the preliminary results of the above referenced project for the following samples:

Chain(s) of Custody No.: 292–11/02/07-0002
Analyses: PCBs
No. of Samples: 19
Matrix: SOIL

Comments:

cc Raj Singhvi, V.Kansal
Central File
Larry.
Task Leader: MARTIN EBEL
Analyst: GIRMA ADMASSU

Number _____
Date Received _____
(To Be Filled in by QAO)

LABORATORY NONCONFORMANCE MEMO

Work Assignment Number : 0-292 Filed By: Girma Admassu

Parameter (s): PCBs Date: 11/09/2007

Sample (s) Affected: 42672 MSD

Area (circle one): Sample Receiving Central Lab Metals GC Lab VOC Lab Tissue Lab **GC Lab**

NONCONFORMANCE (Check appropriate item (s)):

☐ Not enough sample received for analysis
Sample received
☐ Broken/Leaking
☐ Without proper preservative
☐ Improper container
☐ Incomplete paperwork

☐ Holding time exceeded
☐ At receipt
☐ In the lab by ____days

☐ Sample lost during extraction/analysis; no reprep or reanalysis possible

☐ QC data reported to client outside of:
☐ QA/QC Method ☐ QAPP

☐ Other _____

☐Incorrect preparation/analysis procedure used

☐ Sample concentrations exceeded linear range; Reanalysis not conducted

☐ Incorrect/incomplete data reported to client

☐ Blank contamination; no reprep of associated samples done or possible

☐ Reporting limits higher than specified in:
☐ Method ☐ QAPP due to:
☐ Matrix ☐ Insufficient sample
☐ Instrumentation ☐ Other _____

X TCMX was out of the QA/QC criteria.

X

CORRECTIVE ACTION:

☐ Client informed in writing on _____ by _____

☐ Client informed verbally on _____ by _____

☐ Samples processed "as is". Comments _____

☐ Further action required (list details) _____

Corrective action performed by: _____ Date: _____

QC Concurrence: ☐ Nonconformance ☐ Deficiency

Corrective Action Verification

☐ **Verified** ☐**Cannot verify. Reason:** _____

Verified by: _____ **Date:** _____

Preliminary Analytical Report Summary
Tidewater Bailing Site WA# 0-292
November 9, 2007

On 11/05 REAC received 19 soil samples on chain of custody number 292-11/02/07-0002 for PCBs analysis by GC/ECD. The samples were extracted using the standard REAC Soxtherm method. After the extraction, acid and TBA cleanups were preformed to all samples

Analytical Interpretation: The analysis indicated that, in sample 42665 & 42666 low concentration of Aroclor 1260 was found well below the PCBs reporting limit. In samples 42668, 42667, 42687 and 42686 a trace of Aroclor 1260 was observed, however, the concentration of the Aroclor 1260 was not high enough to be reported in the final result table.

All samples were spiked with pesticide surrogates solution prior to extraction. TCMX was out of the QA/QC criteria on the low side in sample 42672 MSD. The rest of the surrogate recoveries were within the QA/QC criteria and recoveries were at satisfactory range.

Two samples were chosen and spiked with Aroclor 1016+1260 mixture spiking solution. All the MS/MSDs recoveries were at satisfactory range. Along the MS/MSDs samples one set of LCS sample also extracted and analyzed. The recovery of the spiking compounds were within the QA/QC criteria and recoveries at excellent range

No target compounds were found in the lab blank.

The initial calibrations and continuing calibrations, all met QC criteria.

Samples were extracted and analyzed within the REAC's holding time.

20 µL of 5 ppm internal standard was added to each 1 ml sample extracts prior to analysis.

Note: Results files could be found in I:\Organics\Organics_10252005\0292 Tidewater Bailing\PCBs\110907*.*

Girma Admassu

Table 1.x Results of the Analysis for PCBs in Soil
WA# 0-292 Tidewater Bailing Site
Based on Dry Weight

Client ID	SBLK110507		42669		42665		42673		42672	
Location	-		2TB		6P		2PM		1PM	
Percent Solid	100		95		96		91		92	
Analyte	Conc. µg/kg	RL µg/kg	Conc. µg/kg	RL µg/kg	Conc. µg/kg	RL µg/kg	Conc. µg/kg	RL µg/kg	Conc. µg/kg	RL µg/kg
AROCLOR 1016	U	41.7	U	43.9	U	43.4	U	45.8	U	45.3
AROCLOR 1221	U	83.3	U	87.7	U	86.8	U	91.6	U	90.6
AROCLOR 1232	U	41.7	U	43.9	U	43.4	U	45.8	U	45.3
AROCLOR 1242	U	41.7	U	43.9	U	43.4	U	45.8	U	45.3
AROCLOR 1248	U	41.7	U	43.9	U	43.4	U	45.8	U	45.3
AROCLOR 1254	U	41.7	U	43.9	U	43.4	U	45.8	U	45.3
AROCLOR 1260	U	41.7	U	43.9	40.6 J	43.4	U	45.8	U	45.3
AROCLOR 1268	U	41.7	U	43.9	U	43.4	U	45.8	U	45.3

Table 1.x Results of the Analysis for PCBs in Soil
WA# 0-292 Tidewater Bailing Site
Based on Dry Weight

Client ID	42671		42670		42674		42668		42667	
Location	1TB		2TBD		1HP		2D		1D	
Percent Solid	94		94		90		97		98	
Analyte	Conc. µg/kg	RL µg/kg	Conc. µg/kg	RL µg/kg	Conc. µg/kg	RL µg/kg	Conc. µg/kg	RL µg/kg	Conc. µg/kg	RL µg/kg
AROCLOR 1016	U	44.3	U	44.3	U	46.3	U	43.0	U	42.5
AROCLOR 1221	U	88.7	U	88.7	U	92.6	U	85.9	U	85.0
AROCLOR 1232	U	44.3	U	44.3	U	46.3	U	43.0	U	42.5
AROCLOR 1242	U	44.3	U	44.3	U	46.3	U	43.0	U	42.5
AROCLOR 1248	U	44.3	U	44.3	U	46.3	U	43.0	U	42.5
AROCLOR 1254	U	44.3	U	44.3	U	46.3	U	43.0	U	42.5
AROCLOR 1260	U	44.3	U	44.3	U	46.3	U	43.0	U	42.5
AROCLOR 1268	U	44.3	U	44.3	U	46.3	U	43.0	U	42.5

Table 1.x Results of the Analysis for PCBs in Soil
WA# 0-292 Tidewater Bailing Site
Based on Dry Weight

Client ID	42666		42678		42688		42687		42686	
Location	7P		1SB		5P		4P		4D	
Percent Solid	94		89		95		95		96	
Analyte	Conc. µg/kg	RL µg/kg	Conc. µg/kg	RL µg/kg	Conc. µg/kg	RL µg/kg	Conc. µg/kg	RL µg/kg	Conc. µg/kg	RL µg/kg
AROCLOR 1016	U	44.3	U	46.8	U	43.9	U	43.9	U	43.4
AROCLOR 1221	U	88.7	U	93.6	U	87.7	U	87.7	U	86.8
AROCLOR 1232	U	44.3	U	46.8	U	43.9	U	43.9	U	43.4
AROCLOR 1242	U	44.3	U	46.8	U	43.9	U	43.9	U	43.4
AROCLOR 1248	U	44.3	U	46.8	U	43.9	U	43.9	U	43.4
AROCLOR 1254	U	44.3	U	46.8	U	43.9	U	43.9	U	43.4
AROCLOR 1260	26.6 J	44.3	U	46.8	U	43.9	U	43.9	U	43.4
AROCLOR 1268	U	44.3	U	46.8	U	43.9	U	43.9	U	43.4

Table 1.x Results of the Analysis for PCBs in Soil
WA# 0-292 Tidewater Bailing Site
Based on Dry Weight

Client ID	42685		42679		42677		42676		42675	
Location	3D		2SB		2FB		1FB		2HP	
Percent Solid	98		87		94		94		90	
Analyte	Conc. µg/kg	RL µg/kg	Conc. µg/kg	RL µg/kg	Conc. µg/kg	RL µg/kg	Conc. µg/kg	RL µg/kg	Conc. µg/kg	RL µg/kg
AROCLOR 1016	U	42.5	U	47.9	U	44.3	U	44.3	U	46.3
AROCLOR 1221	U	85.0	U	95.8	U	88.7	U	88.7	U	92.6
AROCLOR 1232	U	42.5	U	47.9	U	44.3	U	44.3	U	46.3
AROCLOR 1242	U	42.5	U	47.9	U	44.3	U	44.3	U	46.3
AROCLOR 1248	U	42.5	U	47.9	U	44.3	U	44.3	U	46.3
AROCLOR 1254	U	42.5	U	47.9	U	44.3	U	44.3	U	46.3
AROCLOR 1260	U	42.5	U	47.9	U	44.3	U	44.3	U	46.3
AROCLOR 1268	U	42.5	U	47.9	U	44.3	U	44.3	U	46.3

Table 2.x Results of the Surrogate Recoveries
for PCBs in Soil
WA# 0-292 Tidewater Bailing Site

	Percent Recovery	
Sample ID	TCMX	DCBP
SBLK110507	62	116
SLCS-PS60	74	120
42669	49	125
42665	96	127
42673	91	113
42672	39	116
42672 MS	36	113
42672 MSD	28 *	116
42671	87	114
42670	80	108
42674	81	113
42668	80	108
42667	85	111
42666	86	115
42666 MS	104	127
42666 MSD	89	117
42678	81	110
42688	80	109
42687	66	101
42686	82	115
42685	87	114
42679	84	115
42677	74	107
42676	72	98
42675	85	111

	ADVISORY QC Limits
Tetrachloro-m-xylene (TCMX)	30-150
Decachlorobiphenyl (DCBP)	30-150

Table 2.x (cont.) Results of the LCS Analysis for PCBs in Soil
WA#0-292 Tidewater Bailing Site
Based on Dry Weight

Sample ID:	SLCS-PS60				
Compound	Sample Conc µg/kg	LCS Spike Added µg/kg	LCS Conc µg/kg	LCS % Rec	Advisory QC Limits % Rec
AR 1016	U	167	159	95	70-130
AR 1260	U	167	188	113	70-130
ANALAZED ON 11-07-2007					

Table 2.x (cont.) Results of the MS/MSD Analysis for PCBs in Soil
WA#0-292 Tidewater Bailing Site
Based on Dry Weight

Sample ID: 42672

Compound	Sample Conc µg/kg	MS Spike Added µg/kg	MS Conc µg/kg	MS % Rec	MSD Spike Added µg/kg	MSD Conc µg/kg	MSD % Rec	RPD
AR 1016	U	181	138	76	181	131	72	5
AR 1260	U	181	204	113	181	208	115	2

Table 2.x (cont.) Results of the MS/MSD Analysis for PCBs in Soil
WA#0-292 Tidewater Bailing Site
Based on Dry Weight

Sample ID: 42666

Compound	Sample Conc µg/kg	MS Spike Added µg/kg	MS Conc µg/kg	MS % Rec	MSD Spike Added µg/kg	MSD Conc µg/kg	MSD % Rec	RPD
AR 1016	U	177	180	102	177	222	125	21
AR 1260	26.6	177	256	129	177	228	114	12

EP-C-04-032

CHAIN OF CUSTODY RECORD

Site #: 292
Contact Name: D Killeen
Contact Phone: X4245

No: 292-11/02/07-0002

Lab #	Sample #	Location	Matrix	Collected	Numb Cont	Container	Preservative	Analyses	MS/MSD
IS365	42669	2TB	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
IS366	42665	6P	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N
IS367	42673	2PM	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
IS368	42672	1PM	Soil	11/1/2007	2	8 oz cwm	4 degrees C	PCBs	Y
↓	42672	1PM	Soil	11/1/2007	2	8 oz cwm	4 degrees C	Lead (Pb)	Y
IS369	42671	1TB	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N
↓	42671	1TB	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
IS370	42670	2TBD	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
IS371	42674	1HP	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N
IS365	42669	2TB	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N
IS371	42674	1HP	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
IS372	42668	2D	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N
↓	42668	2D	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
IS373	42667	1D	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N
↓	42667	1D	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
IS374	42666	7P	Soil	11/1/2007	2	8 oz cwm	4 degrees C	PCBs	Y
↓	42666	7P	Soil	11/1/2007	2	8 oz cwm	4 degrees C	Lead (Pb)	Y
IS366	42665	6P	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
IS370	42670	2TBD	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N

Special Instructions: Pb prelims due in 2-3 days, PCB prelims in 5 days

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Samples received 4°C Fm 11/5/07

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
All Analysis	Chuck Killeen	11/5/07	Jenny Harris	11/5/07	8:00	10/Metals Analysis	Jenny Harris	11/5/07	J-2 a td	11/05/07	8:45 AM
Transfer, to organic Lab	J-2 a td	11/05/07	Jenny Harris	11/5/07	10:10	All/PCB Analysis	Jenny Harris	11/5/07		11/05/07	11:30 AM

EP-C-04-032

CHAIN OF CUSTODY RECORD

Site #: 292
Contact Name: D Killeen
Contact Phone: X4245

No: 292-11/02/07-0002

Lab #	Sample #	Location	Matrix	Collected	Numb Cont	Container	Preservative	Analyses	MS/MSD
15375	42678	1SB	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
15376	42688	5P	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N
15377	42687	4P	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N
↓	42687	4P	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
15378	42686	4D	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N
↓	42686	4D	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
15379	42685	3D	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N
↓	42685	3D	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
15367	42673	2PM	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N
15380	42679	2SB	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
15376	42688	5P	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
15375	42678	1SB	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N
15381	42677	2FB	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N
↓	42677	2FB	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
15382	42676	1FB	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N
↓	42676	1FB	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
15383	42675	2HP	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N
↓	42675	2HP	Soil	11/1/2007	1	8 oz cwm	4 degrees C	Lead (Pb)	N
15380	42679	2SB	Soil	11/1/2007	1	8 oz cwm	4 degrees C	PCBs	N

Special Instructions: Pb prelims due in 2-3 days, PCB prelims in 5 days

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Received 4°C jm 11/5/07

Items/Reason	Relinquished by	Date	Received by	Date	Time
all Analysis	[signature]	11/5/07	[signature]	11/5/07	8:00
All Analysis	J. Killeen	11/5/07	[signature]	11/5/07	10:10

Items/Reason	Relinquished By	Date	Received by	Date	Time
All Metals Analysis	[signature]	11/5/07	[signature]	11/05/07	8:45 AM
All PCB Analysis	[signature]	11/5/07	[signature]	11/5/07	11:30 AM